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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,909	05/01/2006	Hiroyuki Hirano	127851	6890
25944 7590 12/02/2008 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
PIPALA, EDWARD J				
ART UNIT		PAPER NUMBER		
3663				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/577,909

**Applicant(s)**

HIRANO ET AL.

**Examiner**

EDWARD PIPALA

**Art Unit**

3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 July 2008.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-18 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 01 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/CIS)  
Paper No(s)/Mail Date 7/18/08  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This Office action is in response to Applicant's Arguments and remarks filed 7/3/08, as well as the IDS submissions of 7/3/08 and 7/18/08.

Claims 1-18 are presently pending.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

While Applicant has provided a written description/specification, and drawings, there appears to be insufficient hardware/structure and software/program disclosure to enable one of ordinary skill in the art to make and use the invention as recited in independent claims 1, 10 and 18

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-18 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1, 10 and 18 each recite control and/or processing "units" that are said to have either a "smaller control load" or a "greater control load", however these are each relative terms and it is not clear for the purpose of defining the metes and bounds of pending claims 1-18 exactly what is being claimed by the recitations "smaller control load" and "greater control load", in the context of and the purpose of the pending claimed invention.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loehr et al. (US Pub. 2003/0023407 A1) in view of Toshifumi et al. (Japanese Pub. JP7329701).

With respect to independent claims 1, 9, 10 and 18, Loehr et al. discloses monitoring the functioning of a system by checking input signals, output signals and at least one function unit of the system, where the system includes at least one lower level sub-system and/or is a component of a higher level system. The abstract goes on to

indicate that the system of Loehr et al. includes components in the form of hardware, including sensors, actuators and/or function computers, so as to permit easier unambiguous allocation of any faults in the system to the various function units and that an intended function of the system is subdivided hierarchically as a function of the complexity of the function throughout multiple monitoring layers (greater and lesser control/processing loads). However, Loehr et al. does not necessarily disclose manipulating a corresponding actuator and determining or sensing a failure in a processing unit based on a control target value and information based on the control target along with a response associated therewith.

Toshifumi et al. (JP7329701) discloses a simplified reliability control system based on carrying out mutual communication between vehicle control devices that transmit and receive signals from/to each other, where at the end of the abstract it is taught that a computation command part (63) carries out a computation with a prescribed computation formula by giving a prescribed figure to the sub-computation part (61), and a control breakage (fault, error or failure) judgment part (64) determined the breakage (fault, error or failure) based on the computation results.

Accordingly, it would have been obvious to one of ordinary skill in the art of vehicular control systems to implement the error/fault detection system of JP7329701 within the context of the hierarchical control system of Loehr et al., so as to determine a failure in a control subsystem by determining if appropriate values are calculated for particular input values used in controller applications.

With respect to claims 2 and 11, relating to determining if a calculation formula has been properly processed, please see JP7329701 as noted above.

With respect to claims 3, 5, 12 and 14, relating to diagnosing a failure or interruption in the diagnosing system or control, please see Loehr et al. which teaches that the lower-level and higher-level systems function by checking input signal, output signals and at least one function of the system.

With respect to claims 4 and 13, relating to a multiplexed configuration of the calculating units, to which the Examiner takes Official Notice in that the use of multiplexing in microprocessor based systems is notoriously old in the art.

With respect to claims 6-8 and 15-17, relating to a plurality of control units, assigning priorities to failure sensing and performing failure sensing with higher priority on processing units with smaller processing duties (control loads) , please note that Loehr et al., specifically teaches a hierarchal monitoring system with higher and lower level subsystems which perform distributed fault processing to "permit easier unambiguous allocation of any faults occurring in the system to the various function units of the system" (from the abstract of Loehr et al).

### ***Response to Arguments***

5. Applicant's arguments filed 7/3/08 have been fully considered but they are not persuasive. Upon further consideration of the present claim language, the previous

interview discussion and Applicant's present arguments, it has been determined that the previous rejection under 35 U.S.C. 103 is being maintained, and the new rejections under 35 U.S.C. 112, first and second paragraphs, have been added.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWARD PIPALA whose telephone number is (571)272-1360. The examiner can normally be reached on M-S 9:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward Pipala/

Examiner, Art Unit 3663